of the most important, as skin infections too are prevalent.

No doubt in many instances we all fail to recognize the scabetic element when other conditions are marked. However, any widespread superficial infection should bring to mind the possibility of scabies as an exciting cause. And not in every instance is it a simple matter to prove the presence or absence of scabies.

When in doubt and when the typical runs are masked by added infection, or when the natural progress of the disease is held in abeyance by the patient's occupation, bringing his hands and forearms in contact with deterrent chemicals such as occurs with those working in the gasolines and oils, it is well to prove the presence of the mite or its eggs or feces. This usually can be done by slicing off a suspicious-looking lesion from a finger or wrist with a sharp blade, cutting as deep as the papillary layer, mounting the flat specimen in glycerin and examining it under a low power lens of the microscope.

Creolin has proved an excellent addition to the therapeutic armamentarium for the cure of scabies. It is an excellent scabicide in a nonirritating strength, and it has the additional most desirable feature of acting as a decided antiseptic help in clearing up whatever pyogenesis may be present. It also has a definite place with skins that are sensitive to sulphur.

It is always well to specify a particular preparation of creolin. The druggist knows the best one. Five per cent strength in vaselin or incorporated in unguentum acidi borici has proved most satisfactory.

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ROBERT T. LEGGE, M. D. (University of California Infirmary, Berkeley).—At the students' infirmary at the University of California, in Berkeley, we frequently see cases of scabies. For many years our methods of therapy were similar to those recommended by Doctor Clark. Since Greenwood published in the *Journal of the American Medical Association* in 1924 "The Danish Treatment for Scabies," we have used exclusively this highly successful method of treatment. This ointment depends upon the production of hydrogen sulphid, which enters the skin and is lethal to the parasite. The ointment is applied carefully all over the body except the hair, and the patient is then confined to bed for twenty-four hours. The next morning the treatment is completed by a hot soapy bath and the wearing of clean clothes. Failures are exceedingly rare, and one treatment is sufficient. Care must be exercised to treat all other cases in the family. Protection against reinfection by boiling underclothes, sulphur fumigation of bedding, and treatment of contacts is essential.

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C. RAY LOUNSBERRY, M. D. (Medico-Dental Building, San Diego).—I have listened to Doctors Clark and Stebbins' paper on scabies with much interest, because we, as a profession, are prone to minimize the importance of ordinary diseases. Scabies has been a very prevalent disease since the war. We who were in the service would see whole companies of World War veterans infested with the itch mite. From our war experiences we have learned how to cope with this condition en masse. Now today we can profit by that experience, in our treatment, to some extent.

The Navy method of treatment was as follows: Routinely the men reported to the sick bay, complaining of the classical symptoms of scabies. Then a microscopic examination of the scrapings from a lesion was made to determine definitely the exact diagnosis in each case. The scabetics were then taken to a shower room and were given a hot bath and a scrub with tincture of green soap, after which they were told to rub into the affected areas sulphur in combination with balsam of Peru ointment. Then they were placed in the scabetic ward. Of course, all their clothes were removed and clean pajamas were given them; also clean bedding was provided daily. This treatment was continued from three to five days. At the termination of that time most of the uncomplicated cases appeared apparently well. Remember, these cases were isolated. Care should be taken to determine whether or not the patient is sensitized to sulphur, because a sulphur rash could be severe.

In our clinical practice in southern California, where we are called upon to treat so many illiterate Mexicans, who live in hovels of filth, the problem is difficult. They do not follow out directions, and when they do they immediately reinfest themselves. We have printed directions, translated in Spanish, and written in English, which helps us a great deal in our ambulatory cases.

Practically all our cases in San Diego are complicated with impetigo, as well as other pyogenic forms of infection associated with sand flee, mosquito, and other bites—combined with boils. Thus we have a mixture of diseases which are very hard to treat, especially when the ringworm fungus is found.

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DOCTOR STIBBENS (Closing).—Primarily, we presented this paper to emphasize to the general practitioner the differential diagnostic points and the complications of the disease, particularly in relation to impetigo and other pyogenic infections. If this object has been attained we will feel that we have been amply repaid.

The Danish treatment, as cited by Doctor Legge, is a very valuable method of attacking the disease, but, unfortunately, cannot be used in treating the very young patient or in severe cases of impetigenous or secondary infection, without great danger of producing a very severe dermatitis.

In these cases we must first endeavor to subdue the inflammatory symptoms and then feel our way cautiously toward radical treatment of the disease by gradually increasing the strength of our parasiticides. These cases require application of boric acid lotion or weak liquor carbonis detergens at first and then, as improvement occurs, gradual change to betanaphthol or weak sulphur mixtures. Mercury in any form should be used with extreme caution if the lesions are extensive.

THE DIAGNOSIS AND TREATMENT OF LUNG ABSCESS*

By FRANK S. DOLLEY, M. D.
Los Angeles

DISCUSSION *by Philip H. Pierson, M. D., San Francisco; Harold Brunn, M. D., San Francisco; F. M. Pottenger, M. D., Monrovia.*

FIVE years ago a patient harboring a lung abscess rarely reached the surgeon. Many abscesses remained undiagnosed that are now recognized and those found were treated expectantly with little or no thought of surgical intervention in mind. The mortality under medical treatment alone was from 60 to 90 per cent. Today, with proper and correctly timed surgical intervention, the death rate in the large clinics is from 32 to 45 per cent. The treatment of subacute and chronic lung abscesses is rapidly becoming surgical, and with improving technique the mortality is steadily decreasing.

CAUSES OF PULMONARY ABSCESS

The causes of pulmonary abscess are most diversified. They can originate from the bronchi, blood or lymph. Very often the area involved heals without sloughing. Poor general condition and decrease in the bodily resistance contribute largely to lung cavitation. Diabetics, alcoholics and nephritics are particularly susceptible. Fol-

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lowing penetrating wounds of the chest or even chest contusion, lung abscess is not uncommon. Aspiration of food or other foreign bodies leads frequently to lung abscess. In a strong young person sharp demarcation is the rule. The area is sloughed out, the sequestration is expectorated and smooth healing can occur. A pulmonary abscess following a metastatic infarct from an infected focus in some other region of the body in a patient exhausted from previous illness, tends not to be well walled off but to extend into the surrounding lung tissue. It is this type that is most unfavorable.

The majority of lung abscesses develop in connection with bronchopneumonia. Influenzal pneumonia is particularly liable to such a complication. In a pneumococcus inflammation of the lungs an abscess is seldom seen. In the fibrinous lung inflammation of the emphysematous, pulmonary abscess is not an uncommon sequela.

SYMPTOMS

The symptoms are by no means clear-cut. Diagnosis is not always easy. The history is of great importance and should be painstakingly obtained if the patient is suffering from pulmonary inflammation. A severe chest contusion might have caused a pulmonary hemorrhage with secondary infection and abscess formation. A history of choking while eating, or of unconsciousness from any cause may suggest the contributing factor. Often careful inquiry elicits a past history of sinus or throat infection, grippe, enteritis or furunculosis, from which even weeks later a metastatic septic infarct into the lung could initiate a lung abscess. Leg ulcers are particularly prone to be the seat of the original inflammation.

When a pneumonia does not undergo resolution, when fever and rapid pulse continue and when the cough, whether productive or nonproductive, persists, softening of the lung tissues leading to abscess formation should be strongly suspected. Sudden profuse expectoration of purulent material is highly suggestive. If culture of the pus shows a mixed infection, the diagnosis is practically assured. Before the lung abscess breaks into a bronchus the cough is dry and more or less constant from irritation of the vagus nerve terminals in the bronchial walls. After bronchial communication is established there may be cough only as the abscess refills.

Parenthetically, it is of value to note in the differential diagnosis between empyema ruptured into a bronchus and lung abscess, that in the former condition the pus shows regularly a pure culture of some one organism and that this cough is generally constant rather than periodic as obtains with lung abscess.

The physical signs are extremely variable and seldom aid materially in the diagnosis. The finding of greatest significance is the variance in the auscultatory sounds over the suspected area upon change in the position of the patient. With the abscess containing fluid no sounds may be heard, but with change of the patient's posture the fluid may gravitate into another region, giving râles and amphoric breathing over an area previously dull and silent.

DIAGNOSTIC AIDS

Aside from the history the most important diagnostic aid is fluoroscopy and x-ray films. Fluoroscopy should be done with the patient in the upright position if his condition possibly permits it. Films of the subject flat in bed are worse than useless. No fluid level can appear in this position. The shadows are vague and indistinct, more suggestive of broncho- or lobar pneumonia or empyema, than lung abscess. In the upright position a fluid level often appears, immediately simplifying the diagnosis. Under the fluoroscope change of position in the presence of a fluid level enables one to shift the air bubble above the fluid in various directions, thus definitely outlining the limitations of the cavity. Upright anteroposterior stereoscopic films and a single lateral one should always be taken, for they are almost an indispensable aid in abscess localization.

Lipiodol to delineate the abscess cavity is a material help. Theoretically it would seem easy for the bronchoscopist to find the particular lobe bronchus from which pus is issuing, inject lipiodol and at once by x-ray demonstrate the abscess. However, this does not often occur. The instruments have narrow lumina, the oil is thick, considerable pressure must be exerted to inject it and the portion of the lobe receiving the delineating oil becomes drowned. The fluoroscope reveals a rather solid wall of lipiodol conforming neither to the lung tree nor the supposed abscess cavity. It may or may not be the seat of the inflammatory process. Far more satisfactory is it for the bronchoscopist to inject through a larger instrument without pressure, the main right or left bronchus and allow the oil to gravitate into the various branches of the bronchial tree. It is seldom that oil is shown within the cavity itself, but often the surrounding uninvolved bronchi are splendidly disclosed so that by elimination localization may be greatly furthered.

In the region of the chest presumably involved an area sensitive to pressure can quite commonly be found, if the abscess be not deep within the lung. The author believes this to be one of the most reliable signs in the localization of a lung abscess. Pressure tenderness, if present, in conjunction with the other diagnostic procedures generally locates the abscess sufficiently to warrant approach at this spot. It is the failure properly to localize the abscess and, therefore, the failure in the operative treatment that has heretofore so dampened the ardor of the physicians for surgical consultation.

TREATMENT OF LUNG ABSCESS

The treatment of lung abscess now confronts us. Those who develop pulmonary suppuration are at first and properly under the care of a physician. During the acute stage before definite demarcation has occurred the treatment should continue medical. But when an abscess is definitely established, whether it is discharging through the bronchus or not, if the patient is not

steadily improving, the possibility of surgical intervention should be considered, not by the physician, but in actual consultation with the surgeon with whom in case of surgical intervention he would intrust his patient. There is one exception to the above statement of initial delay. In diffuse lung gangrene, immediate extensive thoracotomy is most emphatically indicated.

Despite the fact that the abscess has broken into a bronchus and its contents are being expectorated, if after six to eight weeks of bed rest, postural drainage and bronchoscopic suction evacuation, the cavity is not steadily decreasing in size and the patient improving, operation should be advised. When localized lung suppuration is suspected but no bronchial perforation has occurred and therefore no tell-tale fluid level is shown to make the condition evident, if the patient is becoming progressively weaker and his symptoms point strongly toward the sloughing of lung tissues, external drainage should be accomplished as soon as anatomical demarcation of the abscess is assured. This indication also appears usually six to eight weeks after the onset of lung inflammatory symptoms. This is not radical since surgery properly performed as to time and method has nearly bisected the mortality from lung abscess during very recent years. It is the protracted medical treatment that is often radical.

During the period of waiting for demarcation many abscesses heal spontaneously by expectoration. This is particularly true with an abscess developing during bronchopneumonia. After this initial period the percentage of spontaneous recoveries rapidly decreases. Upper lobe abscesses drain better, since gravity greatly aids. Collapse of the cavity walls, however, in these upper lobe abscesses is often prevented by adhesions of the pleura to the narrow rib-ring at the thoracic apex. Lower lobe abscesses are emptied by increased expectorative effort. In the latter the intervals between sputum production are longer and the amount of sputum greater.

The aspiration of a lung abscess for the purpose of localization is almost invariably contraindicated until the parietal pleura is exposed and definite assurance has been obtained that the two pleural leaves are adherent. An exploratory puncture without this assurance is extremely hazardous to the welfare of the patient. The needle withdrawn from the abscess is very liable to convey the infection into a pleura totally unprepared for bacterial invasion. Extensive infection of the pleura occurs, a so-called pleural sepsis follows and death is the usual ending. A small thoracotomy opening to drain this extremely septic material is not sufficient. To be life-saving, an extensive rib resection must be carried out at the most dependent part of the pleural space with gauze tamponade between the pleural leaves. Exploratory needling therefore is definitely excluded from our diagnostic armamentarium until we are actually prepared to evacuate the pus.

When operation has become the procedure of choice and the collection of pus has been located with as much exactness as possible in regard to position relative to the chest wall, a local thoracoplasty is performed directly over the presumed site of the abscess.

It is important that rib sections be removed over an area definitely larger than that occupied by the abscess in order that there may be collapse of the pleura and adherent lung sufficient to aid in the obliteration of the cavity after its evacuation. It is far better to resect too many than too few ribs. The intercostal muscles, vessels and nerves together with the rib periosteum should be excised in order to reduce the postoperative pain from pressure of the drainage tube or gauze as much as possible. Without periosteal excision, rib regeneration often pulls apart the cavity walls again or prevents their coaptation.

If the pleural leaves are not firmly and broadly adherent they must be made so, provided the patient's condition permits it. It is much safer to do a two-stage operation, proceeding no further in the first stage than to expose the parietal pleura, and tampon tightly with gauze against the parietal pleura; and do the second stage eight to ten days later after adhesions have developed. If, however, immediate drainage of the abscess seems imperative, then one of two means may be employed to exclude the general pleural space. One may sew the parietal to the visceral pleura as far from the site of the proposed opening into the abscess as possible; or one may pack tightly with gauze between the pleural leaves at some distance wide of the abscess. The latter method has given much more satisfactory results and is accomplished in but a few moments.

Positive intrapulmonary pressure under gas and oxygen anesthesia is indispensable in the one-stage operation if the pleural leaves are not adherent. The mask about the patient's mouth and nose should fit tight enough so that the anesthetist can raise the pressure within the breathing bag sufficient to inflate the lung and bring it tight against the chest wall. When the parietal pleura is opened, collapse of the lung is thus prevented. Palpation of the lung thus somewhat inflated is rendered much easier. The anatomical relation of the area of the lung induration to the chest wall opening is more certain. Moreover the packing of the gauze between the pleural leaves about the abscess can be successfully accomplished only by positive pressure, since without this the lung under the influence of a large open pneumothorax collapses towards the mediastinum and is therefore inches away from the chest wall.

General narcosis should be limited to the shortest possible time. It is usually preferable to resect the ribs and expose the parietal pleura under local anesthesia, have the patient attempt to raise and expectorate what pus may have accumulated within his abscess cavity, then to proceed at once thereafter with gas and oxygen anesthesia under positive intrapulmonary pressure.

The choice of approach to the pulmonary abscess is important. Pus lying in the upper lobe is best reached from behind or through the axilla.

In the posterior approach for an upper lobe abscess, the second to the fifth ribs should be excised paravertebrally for six to fifteen cm. The scapula is abducted and drawn laterally. One then has an opportunity to examine the larger part of the lobe suspected of harboring the abscess. If the abscess lies anteriorly or laterally the axillary incision is usually the best. The arm is elevated and the second to fifth ribs exposed. There is little muscle in this neighborhood and the approach is comparatively easy. It is seldom necessary to open a lung abscess anteriorly. It is only indicated when the abscess is a cortical one in the anterior chest region. Lower lobe abscesses are the easiest to drain externally. The site of choice is also posteriorly. Usually the paravertebral incision with the removal of portions of the fifth to eighth, or sixth to tenth ribs is the most favorable one. A good view is afforded of the lower lobe and orientation then is not difficult. Often with an extensive abscess of the anterior or middle lobe, a transverse axillary incision with a second incision downward through the middle of its course affords the best exposure.

When the parietal pleura is thoroughly exposed and pleural adhesions are assured, then and then only is it permissible and advisable to explore with a needle. When the pus is found, entrance into the abscess is most safely effected with the thermocautery. Tearing of the lung tissues very greatly increases the danger of air emboli. Direct incision is not contraindicated, but hemorrhage is sometimes more difficult to control without packing. The danger of air emboli is greatly reduced if the patient is under positive intrapulmonary pressure when the lung tissue is entered, since positive pressure within the lung in a large measure excludes the possibility of the entrance of air into the open veins. The external wall of the abscess should be opened as widely as possible to insure healing of its walls from within outward. Gauze packing or rubber tubes wrapped in gauze allow the best drainage.

SUMMARY

The time allotted can permit no more than a very hasty survey of the treatment of pulmonary abscess. Medical and bronchoscopic treatments are of very definite value. Many cures are thus effected. These cures occur in a very great majority of cases, however, during the first eight weeks. Thereafter the percentage of complete recoveries markedly decreases and the mortality rate rises. If the pulmonary abscess is deeply situated within the lung, artificial pneumothorax is strongly indicated for trial. It often dramatically obliterates the cavity. If the pleural abscess is situated more superficially, artificial pneumothorax is a very hazardous procedure. Should perforation through the visceral pleura occur, pleural sepsis follows with its high mortality. A temporary paralysis of the diaphragm on the involved side, accomplished by crushing of the phrenic nerve in the neck, frequently relaxes the pulmonary tissues sufficiently when an abscess is discharging through the bronchus to effect a complete and permanent obliteration of the cavity. This result is rarely achieved, however, except during the acute or subacute stage of the disease.

The internist should never desert his patient. Medical treatment is constantly required and the interests of the patient are best conserved by his frequent consultation with the surgeon during the patient's postoperative course. It is the consensus of opinion today among those who have had the most experience in its surgical treatment that during the period of development and anatomical demarcation a pulmonary abscess is best treated medically; but that after an abscess is definitely diagnosed and walled off, unless the patient is showing steady improvement, the best prognosis for lung abscess is by a rightly timed and carefully conducted surgical intervention.

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DISCUSSION

PHILIP H. PIERSON, M. D. (490 Post Street, San Francisco).—This paper of Doctor Dolley's has offered us a very clear and concise system of procedure in the diagnosis of pulmonary abscess and in its treatment. In this condition, the closest coöperation of the group, consisting of the bronchoscopist, surgeon and internist, is of utmost importance. If this coöperation and consultation begin early, they will be of more value than when asked for just before their particular services are given. Intensive medical treatment does not mean a passive attitude, waiting for nature to do everything herself, but it requires careful explanation to the patient about the type of posture most suited to him, the preference of circulating fresh air to merely open air, as to an easily digestible as well as a high caloric diet, particular care of his mouth and sunshine when this can be used locally with safety.

Artificial pneumothorax is very frequently suggested as a possible form of treatment, but it seems to me its usefulness is so limited, namely to central abscesses where dangerous bleeding is a part, as to be practically nil. These abscesses generally do well under posture plus bronchoscopy.

In acute abscess lipiodol gives very little information which is not gained from the pictures, as previously suggested. When the lipiodol is massed in one section of the lung, it may suggest the presence of an abscess where there is none (a matter discussed at some length by Mosher). When bronchiectasis has developed about a cavity, lipiodol is then helpful in detecting its amount.

Series of roentgenograms are of great aid in determining not only the ultimate prognosis, but the rate of progression of the disease condition. We have found lateral films of a great deal of value in properly determining the location and extent of these abscesses.

As has been said, intensive medical treatment greatly reduces the mortality in pulmonary abscesses, but at times too long a delay in resorting to surgery will allow the abscess wall to become so rigid that thoracotomy and even thoracoplasty will not be followed by collapse and it is to avoid this condition that the coöperation of the group is of utmost value.

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HAROLD BRUNN, M. D. (384 Post Street, San Francisco).—Doctor Dolley has given us a very clear and concise picture of lung abscess as we see it clinically, and has laid down some very important data for our consideration.

In our own work we find ourselves operating less and less for the acute abscess. Under proper handling we feel that a larger and larger percentage of these cases are cured by expectant treatment; carrying out a number of carefully planned procedures for each individual case. It is important, however, that if these procedures do not relieve the patient operation should

be undertaken, as Doctor Dolley points out, before the abscess becomes chronic.

The treatment for an acute and a chronic abscess is therefore very different. In the acute abscess we attempt to establish drainage by posture, by bronchoscopy and by artificial pneumothorax, and we choose the method or methods depending upon the case and its progress.

Of these methods probably the bronchoscope is the most important in removing plugs or granulations or opening up a bronchus with cocain and adrenalin, allowing the discharge to be liberated. At times also we use in addition after such bronchoscopies carbon dioxid and oxygen to increase ventilation of the lung, which in turn tends to keep the cavity empty. We try to be extremely careful not to allow time to slip by until the patient shall have become so seriously weakened by continued infection as to make recovery difficult, even by operative interference.

The course of many of these abscesses is very erratic and each case requires individual study. We feel that one can be very easily stampeded into a too early operation, and if this occurs death may ensue from the dislodgment of emboli which might otherwise have cleared up under some carefully provided system of drainage. Those patients that have hemorrhage along with expectoration are the ones that are the most trying and in these we attempt an early pneumothorax. Bronchoscopy here becomes more dangerous and operation also carries with it a higher mortality.

In conclusion we wish to repeat that our operations have diminished more than half and we believe we are clearing up our cases in a much quicker time by correlation of the different methods of producing drainage of the abscess.

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F. M. Pottenger, M. D. (Monrovia).—Doctor Dolley's paper on the diagnosis and treatment of lung abscess presents to us an excellent discussion of one of the most difficult problems in chest disease. The old method of draining an abscess as soon as it is diagnosed is wrong. During the acute state of an abscess it should always be given an opportunity to heal, and operative procedures should not be undertaken until the abscess is walled off. When the acute pathologic changes have come to a standstill, and the abscess is walled off, then operative procedures should be undertaken, if deemed necessary.

In some of these cases pneumothorax will compress the tissue and bring about a satisfactory healing. In other cases it seems to be insufficient and wholly fails to control the pathology.

If after a few weeks' medical observation the abscess does not show a tendency to heal, the surgeon should always be called into consultation.

Aside from pneumothorax, in the treatment of early abscess, drainage may be assisted by posture and also by bronchoscopy. Where the abscess drains slowly, bronchoscopy has often given marked relief. Unless free drainage is established and maintained there is no possible chance for healing.

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Doctor Dolley (Closing).—I feel that little need be added except by way of emphasis on the points so well brought out by the discussers. I shall close with but a word of further caution in regard to the employment of artificial pneumothorax in the presence of acute or even chronic lung abscess if a recent flare-up involving the surrounding lung tissue is evident. I am firmly convinced that even if a lung abscess be apparently deep-seated there is grave danger of acute pleuritis with overwhelming toxemia developing (under artificial pneumothorax treatment) either through needle injury to lung in an infected area or by actual extension of the inflammatory process to the visceral pleura with subsequent rupture into pneumothorax cavity and that only in the chronic or late subacute lung abscesses, when all signs of surrounding pulmonitis have disappeared, is this procedure safely indicated for trial.

CARCINOMA OF THE CERVIX—ITS SURGICAL TREATMENT*

By Hans von Geldern, M. D.
San Francisco

Discussion *by William H. Gilbert, M. D., Los Angeles; Emil G. Beck, M. D., Chicago; C. G. Toland, M. D., Los Angeles.*

PREVIOUS to the comparatively recent introduction of radiologic therapy, surgery had been considered the method of choice in the cure of uterine cancer. As treatment with radioactive rays was developed and perfected, however, many of the strong advocates of radical surgery were gradually won over to radiologic therapy on the basis of the excellent results reported and the almost complete absence of primary mortality. Gynecologists are still divided as to the preferable procedure, especially in the early cases of carcinoma of the cervix.

EARLY SURGICAL PROCEDURES

The first systematic attempts at the surgical cure of cervical cancer consisted of high amputations of the cervix and vaginal hysterectomies. Freund in 1878 introduced the removal of uterine cancers by the abdominal route and had quite a following, but this operation in the hands of others was decidedly unsuccessful and surgeons again turned their attention to the original vaginal technique, obtaining far better primary results. During this same period Byrne introduced cautery amputation of the cervix, reporting a number of cures. Operators, however, soon realized that their failures were the result of incomplete excision of carcinomatous tissue, and a number of surgeons, notably Ries, Clark and Werder, again became interested in the abdominal approach, developing a radical procedure which was perfected and popularized by Wertheim. Werder later abandoned the operation he originally proposed for a combined vaginal and abdominal cautery extirpation.

RADICAL OPERATIONS

The original Wertheim operation consisted of the removal of the entire uterus, tubes, ovaries, parametria, paracervical tissues and part of the vagina, along with an extensive dissection of the regional glands. At that time the only hope for cure was dependent upon dissecting wide of the carcinomatous extensions and the technique carried with it a high mortality. In the earlier years of radical surgery many hopelessly advanced cases were operated upon, but in subsequent years the pendulum gradually swung back to less radicalism, with more careful selection of patients for operation and improvements in technique.

P. Werner of the II Frauenklinik, Vienna, recently described his present technique. He warns against immediate preoperative manipulation or examinations, and advises spinal anesthesia. Werner emphasizes the importance of after treatment, especially the care of the bladder, and carries out postoperative roentgen radiation on all patients as soon as possible after the operation.

* Read before the Obstetrics and Gynecology Section of the California Medical Association at the fifty-eighth annual session, May 6-9, 1929.